27th Session of the Sub-Committee of Experts
on the Transport of Dangerous Goods (UNSCOE TDG)
4 July – 8 July 2005
Summary of Proposals and Results

Note: This was the first of the TDG Sub-Committee's four meetings scheduled to be held during the 2005/2006 biennium. The main purpose for this meeting was to consider proposed amendments and updates to the UN Recommendations on the Transport of Dangerous Goods, also known as the UN "Model Regulations". The amendments developed by the Sub-Committee during the four meetings in this biennium will be submitted for final consideration and approval at the 3rd session of the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals in December 2006. Once approved by the Committee, the amendments will be incorporated into the 15th Revised Edition of the UN Model Regulations and will be incorporated into the IMDG Code and ICAO TI from January 1, 2009.

UN Papers for the 27th session may be downloaded from the UN Transport Division website at:
http://www.unece.org/trans/main/dgdb/dgsubc/c32005.html
Visit the website of the Office of Hazardous Materials Safety's Director of International Standards at: http://hazmat.dot.gov/intstandards.htm for pertinent information relative to the office's international activities including: Schedules of International Meetings, The UN Recommendations on the Transport of Dangerous Goods (UN Model Regulation), The UN Committee and Sub-Committee of Experts on the Transport of Dangerous Goods, International Atomic Energy Agency International Maritime Organization's Dangerous Goods, Solid Cargoes and Containers (DSC) Sub-Committee, International Civil Aviation Organization (ICAO) Dangerous Goods Panel European Agreements Concerning the International Carriage of Dangerous Goods by Road (ADR) and Rail (RID) North American Free Trade Agreement (NAFTA) Hazardous Materials Land Transportation Standards Sub-Committee.

Paper #	Paper Title/Summary	Comments
	AGENDA ITEM 3 – EXPLOSIVES, SELF-REACTIVE SUBSTANCES AND ORGANIC PEROXIDES Many of the papers under this agenda item were referred to the Working Group on explosives. The discussion of the working group is contained in INF.39.	
2005/5	**Aluminium witness screens used in Series 6 (c) testing** (Australia) – This proposal recommends amendments to 16.6.1.2 (g) of the Manual of Test and Criteria (Fourth	We opposed this paper. The issue of the type of aluminum witness screen that can be used was discussed at length during the 1997-98 biennium.

	revised edition) with regards to the specifications for aluminum witness screens. Australia identifies a problem with limited availability of the 1100-0 aluminum specified in the series 6(c) External Bonfire Test. They are proposing text that provides for equivalent materials that do not have a greater resistance to indentation than the 1100-0 aluminum sheets of Brinell Hardness 23 and tensile strength of 90 Mpa. They also provide a table of equivalent alternative materials. **Comments to ST/SG/AC.10/C.3/2005/5** (Netherlands)	A calibration method to judge the equivalency of aluminum was established by the group of experts on explosives during the July and December sessions in 1998. We do not believe that listing specific types of equivalent alternative materials is helpful or necessary. We provided the working group guidance on the calibration method. **Result:** All experts were invited to assess whether aluminum 1100-0 or 1050A is available and obtainable in their countries. Proposals may be submitted during this biennium.
2005/22	**Additional test for determining 1.4 S classification - Evaluation of properties in the definition not currently tested** (Canada) – The expert from Canada states that the 1.4S classification criteria rely solely on the results of the Manual of Tests and Criteria 6(c) test. However, the definition of Class 1.4 includes other characteristics that are not determined by the 6(c) test. This paper suggests that the portion of the definition for 1.4 S, "any hazardous effects arising from accidental functioning are confined within the package", this not addressed by the current required testing. The expert from Canada proposes that a new test, numbered 6(d), be added to determine those requirements for which there is no current test. The 6(a) test can serve as a basis to determine the effects outside the package in case of ignition during transport. After completing the test series 6(a), 6(b) and 6(c); 6(d) would be conducted. The product in question would be initiated in the same manner as prescribed in Test Series 6(a). Items provided with their own means of initiation would use those means unless it is impractical or unsafe to do so. For such a case a remote activation	We did not support this proposal. The Committee spent over four years of effort (1995 to 1998) in revising the test methods and criteria for the 6(c) test in the Manual of Tests and Criteria. The Committee developed specific criteria for classifying explosives into various divisions and compatibility groups including Div. 1.4 and 1.4S. These criteria are reflected in paragraphs 16.6.1.4.5 and 16.6.1.4.6 of the Test Manual. It is recognized that there may be some variation in the interpretation of the note under 2.2.2.4 (d) in the UN Model Regulations which takes into account "hazardous effects" of the product arising from accidental functioning. With the revisions that have been introduced in the 6(c) test, the US believes that the hazardous effects referred to in the note of 2.1.1.4 (d) should be regarded as the same effects that are used to define 1.4S in the

	initiation system should be prepared to remove testing personnel from the vicinity of any effect. If the item did not include its own means of initiation, the intended means of initiation should be used. **Comments on ST/SG/AC.10/C.3/2005/22** (USA) – US rationale for not supporting this proposal.	6(c) test. The criteria for 1.4S in the 6(c) test taken together with criteria that are already included in the 6(a) and 6(b) tests are comprehensive and do not need further revision **Result:** There was some sympathy within the working group to review the criteria with respect to the criteria for shape charges but not to consider a complete review of the testing for all 1.4S articles. Many felt this was unnecessary particularly for items such as small arms. The expert from Canada clarified that his objective was not so broad and was focused on shape charges. A number of experts agreed with the US that there was not sufficient data to reopen the debate. Canada stated they would present a new proposal at a future session based on the comments received.
2005/24	**Manual of Test and Criteria Texts of 10.4.3.3 versus 16.3.1** (Norway) - Norway proposes to amend the text in the Manual of Tests and Criteria 10.4.3.3 by aligning it with the text contained in 16.3.1(a). The amended text clarifies that the competent authority is the only body authorized to assign a hazard Class/division based on the results from other test or available information rather than the prescribed Test Series 6.	The US supported this proposal. **Result:** This proposal was adopted.
2005/10	**Transport of Nitroguanidine, wetted (UN 1336) in flexible IBCs** (ICCA) - This paper proposes a new IBC4xx to allow the use of IBCs for UN1336 as approved by the Competent Authority. The proposal would prohibit sea transport and include a new Special Packaging Provision Bxx requiring the transport of this material in an IBC in closed transport units.	We did not support this proposal as written. We expressed concerned that this would set a precedent for inclusion of other desensitized explosives that could present a safety concern if the diluent does not stay at the necessary level throughout the transportation cycle.

INF.15	**Revision of ST/SG/AC.10/C.3/2005/10** (ICCA)	As a minimum, the proposed structure needed additional work. This paper proposed a packing instruction allowing for competent authority approval. IBC 99 already exists for competent authority approval. It's possible IBC99 could be amended to include the necessary transport conditions for Nitroguanidine with an additional IBC Special packing provision (B note). **Result:** ICCA modified their proposal with INF.15. Nevertheless, many delegations questioned specific parts of the ICCA proposal and opposed the use of flexible IBCs for desensitized explosives. There was not much support for this proposal, but ICCA stated they would submit a revised proposal at the next session.
2005/6	**Report of the informal Working Group on Ammonium Nitrate Emulsions (ANE), Suspensions and Gels and Test Series 8** (Netherlands) – This paper provides the outcome of an informal working group held on 14-15 Feb 2005. The discussions of the working group identified a general opinion that further work should be done to improve the Test Series 8 requirements.	No action required for this report. It was supplied for information only as it relates to decisions on future work of the Working Group. Paragraph 46 indicated that the expert from the UK would submit a proposal to revise figure 10.4 (see – C.3/2005/14). **Result:** The report was presented by the explosive working group chairman (Norway) for information only.

2005/11 INF.7	**Procedure and criterion for the modified vented pipe test** (Spain) – In this paper, Spain claims there is a problem with the Series Test 8(d) Vented Pipe Test in the Manual of Tests and Criteria for establishing if ANE can be assigned to Class 5.1 and is suitable for transport in tanks. They state the test does not specify the heating rate that the sample must be subjected to; thus, the test is not reproducible. They are proposing an Alternative Vented Pipe Test as originally suggested by Australia. **Test Series 8 – Comments on documents ST/SG/AC/10/C.3/2005/11 and ST/SG/AC.10/C.3/2005/14** (Sweden) Sweden does not support the MVPT as proposed in 2005/11.	We did not support this paper because the "Modified Vented Pipe Test" is intended to determine if the type of "Ammonium nitrate emulsion, suspension and gel" is suitable for transport in bulk. It is not a classification test. In addition, it is premature to change the status of the modified vented pipe test while discussions are still in progress to revise Test Series 8 as indicated in 2005/6 of the Madrid working group report. **Result:** The general view of the working group was that a large-scale test is necessary. However, the group could not take a decision and proposed to postpone further action until July 2006 awaiting results of additional testing.
2005/14 INF.21	**Proposed changes to Test Series 8** (United Kingdom) – Based on the informal working group on ANE held in Feb 2005 (see ST/SG/AC.10/C.3/2005/6), the UK proposes amendments to the flow chart in the Manual of Tests and Criteria, Figure 10.4. The proposal is to clarify that ANE substances giving an "Yes" decision to the Test 8(c) should be directed to the most appropriate UN numbers. **Comments to proposed changes to Test series 8 described in ST/SC/AC.10/C.3/2005/14 and 2005/6** (USA) - Proposes that the wording in the "Yes" box of Test 8(c) be changed to "Substance to be considered for inclusion in Class 1".	It was our opinion that the current requirements in the UN Model Regulations including the wording in Figure 10.4 are adequate to ensure that materials assigned to UN 3375, after meeting the criteria of Test Series 8, are safe for transport. There is no need to revise the provisions addressing materials that fail Test Series 8. If anything, the wording in the "Yes" box of Test 8(c) could be simplified. We submitted an INF document in response. **Result:** The Sub-Committee adopted modifications to Figure 10.4 of the Manual of Tests and Criteria based on the UK proposal.
INF.4	**Explosives, Self-Reactive Substances and Organic**	**Result:** The general view of the working group

	Peroxides – Amendments to the Manual of Tests and Criteria (Germany) - This paper is a follow-up from Germany taking account of comments made at previous sessions to submissions ST/SG/AC.10/2004/14 and UN/SCETDG/25/INF.92. The current description for the steel tube used in the Koenen-test is written as "The tube is deep drawn from sheet steel of suitable quality." Germany believes this not precise enough and proposes to add 3 specific codes used in Europe, the U.S. and Japan. They also propose to change some of the requirements for the steel tube and a quality control statement.	was that using a reference substance might be a good laboratory practice to ensure the correct hardware, but that this does not need to be included in the Manual.
INF.36	**Explosives, Self-Reactive Substances and Organic Peroxides – Amendments to the Manual of Tests and Criteria** (France)	
INF.39	**Test series 8 and miscellaneous proposals – report of the working group on explosives.**	**Result:** The working group could not reach consensus on the issues concerning Test series 8(d). The other issues were discussed in depth and proposals will be submitted to the July 2006 session.
	AGENDA ITEM 4 - PACKAGING (INCLUDING IBCS AND LARGE PACKAGINGS)	
2005/8	**Packaging performance drop test and righting test for IBCs** (Argentina) – There are two proposals in this paper related to the drop test and righting test for IBCs. (1) Consistent with text in 6.1.5.3.6.3 and 6.1.5.3.6.4, this paper proposes to amend paragraph 6.5.4.9.5 "Criterion for passing the test" corresponding to the IBC drop test by adding the sentence: "The IBC shall not exhibit any damage liable to affect safety during transport." (2) Paragraph 6.5.4.12.3 "Method of testing" corresponding to the IBC righting test, requires lifting of the IBC either by	The US did not support this proposal. We are not convinced there is a need for this additional test requirement. Righting the IBC using the lifting straps closest to the floor is a less severe condition because there will be sheer forces that reduce the load on the lifting straps. The straps are not pulled directly, they are partially under the bag which results in less tensile force. We feel the top lift test adequately addresses the strength of the straps by requiring a 6:1 maximum design load.

	one lifting device or by two when four are provided. The test does not require lifting by both the lifting devices closest to the floor and those furthest away from the floor. Argentina proposes to amend the test requirement that the test be performed first on the lifting devices next to the floor, then using the same IBC, those lifting devices further from the floor.	**Result:** (1) The U.S., along with many other experts, agreed with the proposal in principle. Although this statement is included in other paragraphs of the UNMR, many experts felt the proposed acceptance criteria were too vague and open to interpretation. The expert from Argentina was invited to submit a new proposal at the next session. (2) There was not much support for the second proposal and it was withdrawn.
2005/15 **INF.22**	**Review of Chapter 6.3** (United Kingdom) – In this paper, the UK states that the text in Chapter 6.3 (Requirements for the Construction and Testing of Packagings for Division 6.2 Substances) of the UN Model Regulations is inconsistent with packaging text in Chapter 6.1, and is inadequate and conflicting in certain areas. This proposal attempts to align Chapter 6.3 consistent with other packaging chapters without changing the test requirements. The UK has provided this draft rewrite of Chapter 6.3 as a first step for review of the Sub-Committee, recognizing additional work is required before the Sub-Committee could adopt the proposal. Based on comments received at this session, the UK intends to present a new proposal at the December 2005 session of the Sub-Committee. **Comments on ST/SG/AC.10/C.3/2005/15** (USA) – The US proposes to clarify the text in P620 to clearly indicate that it is not necessary to conduct a pressure differential at temperature extremes.	The US generally supports enhancing the consistency of this chapter with other packaging chapters but did not agree with all of the amendments suggested by the UK. We submitted an INF paper with detailed comments. **Result:** While there was general support for clarifying the text in Chapter 6.3, this paper generated numerous comments on its content. A working group met to discuss the paper and provide comments to the UK so that they could develop a revised paper for the December session. The UK indicated they would submit a new proposal at the next session, taking into account the comments received.
2004/76	**Waterproof packagings** (China) - This paper proposes to add a definition of "waterproof" to Chapter 1.2: "Waterproof packagings (for solids): are packagings for solid substances that can prevent entry of moisture during transport." The	The US agreed in principle that definitions for waterproof and water resistant would be a beneficial addition to the Model Regulations. However, the Chinese proposal only considered a

	paper also proposes to change 6.5.3.2 regarding flexible IBCs (13H4, 13L4 and 13M2) to indicate that they can be made waterproof by using separate liners of water resistant paper, plastics firm bonded to the inner surface of the IBC or one or more liners made of plastics material.	definition of water resistant in the context of flexible IBCs (the wording proposed by China is in line with the current wording for Bags, water resistant (5L3)). The US preferred further technical discussion on this issue including when it is necessary to specify "water resistant" and "waterproof" and take a more global approach toward addressing the issue. **Result:** The discussion on this paper was combined with the problem identified in 2004/75. Some experts were interested in more information related to the incident presented by China in 2004/75 as they felt the contact of this Div 5.1 substance with water should not have caused an explosion. There was general agreement that it would be useful to precisely define the term "water resistant" and perform a more global review of the requirements for waterproof packaging. The experts from China and Australia were invited to submit a new proposal at the next session.
2005/2	**Approval of IBCs UV Resistance of plastics used in IBCs** (Australia) - this paper suggests that rigid plastic IBC's and the inner plastic receptacle of a composite IBC could experience degradation of the plastic material due to exposure to ultraviolet (UV) light. The expert from Australia is of the opinion that a marking should identify the level of UV resistance. They are proposing an additional marking scheme for 6.5.2.2.5 that would indicate the level of UV resistance on a scale from UV0 (unprotected or poor resistance - <0.5 years resistance to weathering) to UV3 (very good resistance - >5 years resistance to weathering).	Based on data supplied in this proposal, we were not convinced a change to the UN Model Regulations is required. The proposed marking scheme is unnecessarily burdensome and would not be effective in enhancing safety because it is difficult and impractical to monitor the amount of sun exposure that an IBC is subject to in every day use. **Result:** Australia deferred to Canada's recommendation in INF.13. Some experts

	Resistance to weathering would be determined using ISO 877, while assessment of the degradation of the material would be determined using ISO 4582. Poor or moderate UV resistance would require transportation in a Closed Transport Unit. **Comments to ST/SG/AC.10/C.3/2005/2** (Canada) – Canada agrees with the concerns expressed by Australia but didn't believe the proposal was practical. They preferred a requirement for rigid plastic IBCs and IBCs with plastic inner receptacles to have a level of UV resistance of at least 5 yrs. They felt this would be consistent with the 5 yr existing limit on plastic containers in 4.1.1.15. In this case, an additional marking would not be required.	considered that an existing provision limiting plastic packagings to 5 yrs applied to plastic IBC's as well. That limit, and the requirement to inspect their condition prior to each use provided adequate safety measures. Others felt it was not currently possible to verify resistance to aging or UV radiation. Australia and Canada were invited to come back with a new proposal at next session.
INF.13 **INF.25**	**Comments to ST/SG/AC.10/C.3/2005/2** (ICCP) - ICCP suggests the current requirements are sufficient and that the proposal does not contain sufficient justification. They add that the proposals are not justified from a cost-benefit standpoint, that the different marking levels create far-reaching storage and use problems, and that the transport conditions are not practical.	
2005/4	**Approval of Intermediate Bulk Containers** (Australia) – Australia discusses concerns they have with the strength and capabilities of "single trip" composite IBCs to withstand conditions normally incident to transportation, to include loading into Cargo Transport Units. They reference numerous documents that have been brought to the Sub-Committee discussing the manufacture and use of "lightweight" IBCs. They propose an amendment to section 6.5.4.6.5 (a) of the Model Regulation in an attempt to remove or reduce subjective judgment from the determination of the	We supported in principle the proposed change from Australia. However, we felt the text required additional work. We do sympathize with the growing concerns associated with the use of poor quality IBC's and the need to introduce greater consistency into the acceptance and rejection criteria. We also believe that introduction of a vibration test for IBCs in the Model Regulations would significantly reduce the likelihood for substandard IBCs to be approved

	level of deformation that is allowed. The current words of "…which renders the IBC, including the base pallet, if any, unsafe for transport…" would be replaced with, " no permanent deformation of the IBC and pallet base, if any, …" The experts of Australia also recommends that a note be added to sections 6.5.1.5.6 that states: *"Where an IBC is to be loaded in a (Cargo) Transport Unit the term "normal handling" includes the stresses on the IBC associated with loading and unloading of the (Cargo) Transport Unit."*	and used for the transport of dangerous goods. In the second proposal, Australia recommends a clarifying note be added in 6.5.1.5.6. We didn't find this note particularly useful or necessary. **Result:** Many experts expressed concern over a perceived downward trend of some composite IBC designs especially with respect to the structural framework in that it has shown limited resistance to deformation resulting from handling impacts and stacking. The Sub-Committee acknowledged there was sufficient concern to warrant a review of the testing and marking requirements and accepted the proposal by Canada in INF.41 to organize an informal working group. The working group will convene in Paris from 10-14 Oct 2005.
INF.14 **INF.26** **INF.9** **INF.41**	**Comments to ST/SG/AC.10/C.3/2005/4** (Canada) – Canada proposes a more comprehensive review of IBC testing, marking and transport requirements. **Comments to ST/SG/AC.10/C.3/2005/4** (ICCP) – ICCP provides reasons for their opposition to this proposal. **Marking of IBC stacking test load** (Austria) – Austria discusses some confusion they have with the current stacking test load requirement in 6.5.2.1.1. **Terms of Reference for a Working Group on IBC Performance Tests –** (Canada)	
INF.33	**Draft ISO standard 16103 (Transport packages for dangerous goods – Recycled plastic materials)** (ISO) – This draft standard specifies the controls necessary for the use of recycled plastic materials. Packagings produced from each batch of recycled materials undergo mechanical testing as in design type testing.	**Result:** ISO's interest is to get this standard referenced in the UNMR and stated that Sub-Committee comments could be rapidly incorporated into the standard. Many delegates did not have sufficient time to review the standard. ISO will submit a specific proposal on amended text to the next session.
	AGENDA ITEM 5 - LIMITED QUANTITIES	

2005/7	**Limited quantity packaging testing requirements** (Australia) – Australia is working to adopt limited quantity provisions based on the UN Model Regulations into their national road and rail regulations. As a result of this effort, they have discovered some concerns over the possibility of a reduction in packaging capability on the basis that testing is not required. This paper proposes to amend section 3.4.2 by requiring the performance packaging testing requirements of 6.1.5 for limited quantity packaging. This paper proposal aims at recommending amendments to section 3.4.2 of the UN Model Regulations on the Transport of Dangerous Goods.	The U.S. did not support this proposal. One of the significant advantages of the limited quantities provision is that UN performance packaging testing is not required. We felt the existing limited quantity provisions have proven to provide an adequate level of safety. **Result:** This proposal was withdrawn.
2005/17 **INF.27**	**Excepted Quantities** (United Kingdom) – The Sub-Committee has discussed at length the issue of reforming the limited quantity provisions with the intent of establishing acceptable requirements to enhance harmonization between transport modes. This review includes the consideration of the concept of excepted quantities. In this paper, the UK proposes excepted quantity provisions for Chapter 3.4 of the UN Modal Regulations based on the existing ICAO air mode requirements. Inclusion of these requirements is justified by the extensive experience within the air mode without significant incident. **Comments on ST/SG/AC.10/C.3/2005/17** (ICCA) – ICCA proposes increases the inner quantity limits from the proposed 30mL/30g to 50 mL/50g.	The U.S. agreed with this proposal in principle. We have been in favor of including excepted quantity provisions, based on the ICAO provisions, to enhance intermodal harmonization. However, we questioned the mark as proposed by the UK and expressed concern that the proposed requirements deviated from those in the ICAO TI. We provided comments to the UK. **Result:** Some experts were in favor of introducing the ICAO TI provisions for excepted quantities into the UNMR. These delegations felt that the provisions were necessary for certain industries, for example laboratory samples, and in practice these shipments are likely moving under the excepted quantities provisions in violation of land transport regulations. However, the UK proposal varied from the ICAO provisions, which would not resolve the problem of multi-modal harmonization. Other delegations were opposed to the proposal based on concern that large

		quantities of material could be transported in vehicles or containers with no labeling or shipping paper identification. There was some suggestion that the UK did not provide sufficient justification, while the UK pointed out that this issue has been subject to intensive discussion over the previous biennium. There has been over 20 yrs of experience in air transport with no reported incidents. The expert from the UK will submit a new proposal, taking into accounts the comments received, at the next session.
	AGENDA ITEM 6 – LISTING, CLASSIFICATION AND PACKAGING	
2004/74	**Confetti** (China) - This paper proposes a new UN number and shipping name for small receptacles containing gas (gas cartridges) that contain "confetti" or colored paper. These items are popular for parties, weddings, etc., and are activated by pulling a release device.	The proposal from China did not provide sufficient technical information (what types of gas, pressures, wall thicknesses and other specifications of the pressure receptacle) to determine if a new UN entry for confetti is necessary or whether they can be assigned to Class 9. Certain types may not need to be subject to the regulations. On the surface it may be appropriate to classify these articles as UN 2037 Gas Cartridges with a special provision to address the release device issue. **Result:** Some delegates agreed with the US that these items were more similar to UN2037, rather than articles of Class 9, and that they could take advantage of SP191 exception when containing less than 50ml of gas. The expert from China agreed to consider the comments and come back with a new proposal at the next session if necessary.
2004/75	**Packing instruction for dichloroisocyanuric acid salts**	The US did not support this proposal. We prefer

	(China) - This paper proposes changes to special packing provision B3 in 4.1.4.2 to indicate which IBCs must be fitted with a sift-proof and water resistant liner – specifically 13H4, 13H5, 13L4 or 13M2. UN 2465, Dichloroisocyanuric Acid Salts, Division 5.1, PG II -IBC08, B4	to address this issue more globally by reviewing all of the substances assigned to IBC08 to ensure adequate protection is provided. **Result:** Following discussion on this paper, the expert from China felt this issue was related to their proposal in 2004/76 (waterproof packaging). China stated they would consider the problem of waterproof packaging in greater detail in cooperation with Australia.
2005/1	**Classification testing for Class 8 materials** (Australia) – In this paper, Australia is identifying an inconsistency between the UN Model Regulations, paragraph 2.8.2.5 (c) (ii) and paragraph 37.4.1.2 of the Manual of Tests and Criteria. Specifically, the UN Model Regulations state that for PG III corrosive substances, testing may be conducted using sheets of steel **or** aluminum; while the Manual of Tests and Criteria specifies tests to be conducted on steel **and** aluminum. Australia suggests that the correct interpretation should be that the testing is required on both steel and aluminum. They propose that the first part of 2.8.2.5 (c)(ii) be modified to read: "…are judged not to cause full thickness destruction of intact skin tissue but which exhibit a corrosion rate on **either** steel or aluminum surfaces exceeding 6.25 mm a year at a test temperature of 55 C when **tested on both materials**…" In addition it is recommended a note be added below 2.8.2.5 (c)(ii) to the effect:	The US agreed that an inconsistency between the UN Model Regulations and the Manual of Test and Criteria does exist in this case. We supported the proposal. **Result:** The proposed change to paragraph 2.8.2.5(c)(ii) and the new note were adopted. It was also suggested this amendment be forwarded to GHS Sub-Committee.

	"***Note**: Where an initial test on either steel or aluminium indicates the substance being tested is corrosive the follow up test on the other metal is not required*."	
2005/13 INF.5 INF.29	**New entry, special provision and packing instruction for lithium ion rechargeable batteries and amendments to Special Provisions 188, 230, and 310** (PRBA) – PRBA is proposing six amendments to the UN Model Regulations to address the classification and transport of lithium ion rechargeable batteries. PRBA contends that there are significant technological differences between lithium ion rechargeable batteries and lithium primary batteries which require a clear regulatory distinction between the two different types. The paper proposes modifying the basis for determining exception limits for lithium ion rechargeable batteries by using watt hours (Wh) rather than equivalent lithium content. It also proposes to introduce a limitation on State of Charge (SOC) of no more than 50% for consideration as an excepted cell or battery. PRBA contends that the use of Wh is easily calculated from the customary information marked on the battery, and that the 50% SOC is standard industry practice. **Use of Watt hours as a Size Criterion for Lithium ion Batteries** (PRBA) – This paper is in support of PRBA's request in 2005/13. It attempts to further support the proposal to use Watt hours (Wh) rather than equivalent lithium content as the basis for determining exception limits for lithium ion rechargeable batteries. **SP 230 Lithium Batteries** (EPBA) – EPBA recommends not applying the 50% state of charge limit on very small batteries such as button cells types.	The U.S. did not support this proposal as written. We felt there were many unanswered questions contained within PRBA's recommendations and that the justification provided does not support the proposals. **Result:** There was some support for evaluating the possibility of classifying rechargeable batteries in terms of their capacity in watt hours, rather than equivalent lithium content, although it would be difficult for many shippers to determine the state of charge. Most experts were not in favor of exempting batteries twice as powerful as those currently exempted, taking into account the incident history in the consumer and transport sectors. A number of experts indicated they would like additional safety and technical justification, such as a risk analysis. PRBA stated they would submit a new proposal at the next session.
2005/16	**New entries for fuel cell system containing flammable gas**	**Result:** The expert from Japan deferred the

	(Japan) – This proposal follows previous proposals presented to the 25th and 26th sessions of the Sub-Committee related to fuel cell cartridges containing flammable gas classified as a Class 9 article. In this proposal, the expert from Japan is recommending the addition of requirements for a "Fuel cell system" which they define as a fuel cell cartridge that is the refillable receptacle containing metal hydride and hydrogen, with or without a fuel cell power unit as an electric generating device. Japan is proposing: 1. A new entry in the DGL for Fuel Cell System, UN3xxx, Class 2.1. 2. A new Special Provision for a fuel cell system containing hydrogen and metal hydride that specifies classification and transport condition requirements. 3. Modify P003 to include a new special packaging provision (PPxx) specifying packaging requirements for this new entry. 4. New tests in the Manual of Tests and Criteria, Part III for fuel cell systems.	consideration of this proposal to the next session.
2005/18	**Miscellaneous proposals – Medicines UN1851, UN3248, and UN3249** (United Kingdom) – In this paper, the UK identifies inconsistencies related to the allowable net quantity per package for these three UN numbers when packaged in limited quantity packaging or UN standard packaging. The expert from the UK points out that the net quantity of a limited quantity package may exceed the net quantity authorized for a tested UN standard package by up to 5X. The paper proposes to retain the current entries for the limited quantity thresholds for UN number 1851, 3248 and 3249. In addition, the proposal amends PP6 in P001	The U.S. supported the effort to correct the inconsistency identified by the UK. However, we questioned if a limit was necessary for this material when packaged in UN standard packaging according to P001. We asked for comments concerning the need for an inner and outer quantity limit in P001 for Medicines UN1851, UN3248, and UN3249. **Result:** The US agreed with the UK but proposed that PP6 be deleted. The Secretariat

	and P002 to read: "For UN 1851 and UN 3248 and UN 3249 only combination packagings shall be used with a maximum net mass per inner packaging of 5L/5kg and maximum net mass per outer packaging of 40 kgs."	stated that the quantity limit was a compromise by the Sub-Committee since SP274 was not applied (no technical name required) due to commercial confidentiality needs of the industry to not identify the specific drug. If transported in larger quantities, the material would have to be described under an NOS listing and a technical name required. The proposal to delete PP6 was voted on and adopted.
INF.6	**New Entry for "Flammable Liquid, Water Soluble, N.O.S containing polar or water soluble mixtures or solutions with a water solubility exceeding 10%** (DGAC) - During the last biennium, the Sub-Committee adopted a special provision for UN 1170, 1987, and 1993 specifying that alcohols containing up to 5% petroleum products must be carried under UN1987 Alcohols NOS. This was to ensure appropriate response procedures for use of alcohol resistant foams. DGAC contends there remains a problem with flammable liquid mixtures categorized as polar or water soluble mixtures which should require alcohol resistant foams for emergency response.	**Result:** Many experts, including the U.S., expressed concerns that adding such an entry would require reclassification of many products presently carried under UN1993. In addition, introducing this concept might imply the need to reclassify many other entries based on emergency response criteria. DGAC stated they would consider submitting a new proposal based on the comments received.
INF.24	**Provisions for the transport of solid substances containers – revised rationalized approach** (ICCA) - ICCA agreed at a previous session to present a rationalized approach for the assignment of bulk container codes (BK1 and BK 2) to solid substances. In this paper ICCA uses as a basis assignment of solid substances that are currently authorized in flexible IBCs (i.e., substances with a Packing Instruction IBC08 in column 8 of the DGL).	**Result:** The US was concerned with expanding the use of bulk containers particularly for substances of Div 4.3. We compared this to the problem referenced by China in 2004/75 for dichloroisocyanuric acid salts. Some expressed concern that, if this proposal were adopted, the bulk container requirements would have to be enhanced for safety. Other experts noted that many additional substances were already authorized for bulk container transport in other modal provisions, and that the current proposal would remove some PGII and Div 6.2 substances

		currently authorized in the UN MR. ICCA did not intend this as a proposal but rather to solicit comments. They will consider the comments received and decide if a future proposal is necessary.
2005/21 **INF.35**	**Portable tank instructions and special provisions for UN 3129** (USA) – This paper proposes to add new portable tank instructions and special provisions to the entry for UN 3129 in the Dangerous Goods List. The assignment of these requirements is consistent with the "Guidelines for assigning portable tank requirements to substances in Class 3-9" (ST/SG/AC.10/25/Add.2). **Comments on ST/SG/AC.10/C.3/2005/21** (USA) – US modifies their proposal.	U.S. proposal. **Result:** The US requested to postpone consideration of this proposal until the next session. The US intends to submit a new proposal based on a comprehensive review of tank assignments consistent with the rationalized approach.
	AGENDA ITEM 7 - MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS	
2005/3	**Definitions of transport units and closed transport units** (Australia) – This paper proposes definitions for "Transport Unit" and "Closed Transport Unit" to be included in section 1.2.1. The definition for "Closed Transport Unit" would be consistent with the section 1.2.1 of the IMDG Code. It also suggests that consideration be given to using the term "Cargo Transport Unit" in lieu of "Transport Unit". This would avoid confusion between the acronym CTU used to describe a "Cargo Transport Unit" and its potential to be incorrectly employed for the term "Closed Transport Unit" as given in special packing provisions PP1, B1 and B2	We agreed that these definitions should be included in 1.2.1. **Result:** Many experts supported including the definition for transport unit in 1.2.1. There were some differences of opinion over the use of the IMDG Code definition of Cargo Transport Unit, and the term Transport Unit as used in the ADR. The expert from Australia agreed to submit a revised proposal at the next session.
2005/9	**Security provisions Chapter 1.4 Addition to the high consequence Dangerous Goods List** (United Kingdom) – This paper proposes to add Ammonium nitrate emulsion, suspension, or gel to the indicative list of high consequence	The U.S. supported this proposal. **Result:** This proposal was adopted.

	dangerous goods in Chapter 1.4. The proposal is to amend Table 1.4.1 to include: "Division 5.1 perchlorates, ammonium nitrate and ammonium nitrate fertilizers, ammonium nitrate emulsions or suspensions or gels, in bulk".	
2005/12	**Transport of Dangerous Goods Marking Requirements** (DGAC) – At the 26th session of the UN SCOE TDG, an amendment for the 14th revised edition of the UN Model Regulations was adopted to add a new 5.2.1.6 to require orientation arrows on certain packages. Class 7 radioactive material in Type B(U), B(M), or C packages are excepted from this requirement. This paper proposes to add three additional packages; Type A and Industrial Package Types IP-2 and IP-3 on the basis that the IAEA believes these packages do not have either a safe or unsafe orientation. DGAC further reports they may add additional packagings to this exception based on future IAEA meetings.	The U.S. supported this proposal. **Result:** This proposal was adopted. However, there is still some concern that Industrial packages should have orientation markings and this issue will be referred to IAEA.
	AGENDA ITEM 8 - HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS	
2005/19	**Harmonization with the International Atomic Energy Agency (IAEA)** (United Kingdom) – In it's last biennium, the Sub-Committee endeavored to review the differences between the International Atomic Energy Agency (IAEA) Regulations and the UN Model Regulations to harmonize wherever possible. The expert from the UK has performed a preliminary review of the provisions within the two regulations. Based on that review, this paper proposes amendments to the UN Model Regulations Chapters 2.7, 3.4, and a new 1.5 (containing all general requirements and definitions applicable exclusively to Class 7 material). The expert from the UK recognizes that the Sub-Committee may not necessarily be in a position to adopt the proposal	The U.S. generally supported enhancing harmonization between the UN Modal Regulations and the IAEA Regulations. A number of differences exist which results in redundant text. During the last biennium, the Sub-Committee took on the first stage efforts to harmonize Class 7 transport requirements with the IAEA Regulations. This first review was conservative and it was anticipated additional work would continue into this biennium under close coordination with the IAEA. In our opinion, the Sub-Committee should not take on much of this work as proposed by the

	without further revision, but is submitting to provide a basis for the Sub-Committee's work on this effort.	UK. The Sub-Committee should take the approach of informing the IAEA of the need for them to eliminate unnecessary transportation differences wherever possible, and where they are unable to do so, provide the Sub-Committee an explanation indicating why differences are necessary. We also feel it may be more appropriate to await completion of the current harmonization efforts before making further amendments. **Result:** The UK explained that some of these provisions could be better integrated into the UNMR using a more consistent format. Several experts agreed with the US that this work should be carried out in close cooperation with the IAEA. The representative from IAEA stated they would organize a meeting in Oct 05 to consider these proposals. The UK expert stated they would submit a new proposal for the next session.
	AGENDA ITEM 11 – GUIDING PRINCIPLES FOR THE MODEL REGULATIONS	
2005/23	**Guiding Principles for the Model Regulations** (United Kingdom) – The UK had previously presented in UN/SCETDG/25/INF.86 work that was intended as a first step toward the development of Guiding Principles for the benefit of all those involved in the development of the Model Regulations on the Transport of Dangerous Goods. In this paper, the UK has reproduced the Guiding Principles as detailed in INF 86, but in what they suggest is a more logical and user friendly order. Further explanatory text has also been added. The UK is asking for the Sub-Committee to review and, if they agree, to place on the UNECE website at the conclusion of this session, adjacent to the Model	The U.S. generally supported this document as a helpful tool for regulators. We had previously provided comments to the UK, especially those related to the Guiding Principles for assigning portable tank requirements. **Result:** The Sub-Committee identified some guiding principles, as agreed upon at the last session, were not updated in this proposal. The UK will prepare a revised document for the next session. The UK and the US will cooperate to develop and submit a proposal for guiding

	Regulations.	principles related to packagings and IBCs.
INF.23	**Guiding Principles for the Model Regulations** (United States) – US conducted a comprehensive review of the portable tank special provisions (TP notes) and provide a proposed TP note rationalized approach.	Concerning INF.23, the Sub-Committee noted that some areas required updating while others proposed substantive changes that would require a specific proposal.
	AGENDA ITEM 9 - OPTIONS TO FACILITATE GLOBAL HARMONIZATION OF THE TRANSPORT OF DANGEROUS GOODS REGULATIONS WITH THE UN MODEL REGULATIONS	
2005/20	**World Convention** (Canada and United Kingdom) – The expert from Italy, in ST/SG/AC.10/C.3/2004/32, provided the Sub-Committee with an opportunity to discuss the issue of enhancing global harmonization of dangerous goods transport requirements. This paper, submitted jointly from Canada and the UK, is presented on more of an informal basis with a view to promote and encouraging discussion of the issues outlined in 2004/32. This paper is clear to point out the concepts contained within do not represent the views of the Government of the United Kingdom or the Government of Canada. This paper attempts to address various key issues: 1. The basic mandate of the Sub-Committee; 2. The core requirements in the Model Regulations that should be adopted globally such as classification and the dangerous goods list, packaging, documentation, and marks, labels and placards; 3. How the Sub-Committee could include compliance issues in its deliberations, including cross-country enforcement; 4. Improving the text of the Model Regulations to make it readily adoptable as an enforceable legal instrument;	The U.S. welcomed this document as a positive step forward to assist the Sub-Committee's efforts to continue enhancement of globally harmonized requirements. The paper suggests numerous possible options for the future. Although we hadn't set a position on any one of them, we felt these suggestions served as a helpful beginning for the Sub-Committee's consideration. The paper included a suggestion for establishing a new multi-modal World Convention. The experts from Canada and UK pointed out this suggestion has been tabled twice in the past. The paper didn't necessarily promote establishment of a World Convention but does provide some helpful background. We continue to be interested in any opportunities to enhance harmonization, but do not support establishing a World Convention. **Result:** The Sub-Committee held an informal discussion during plenary to discuss delegation views and possible options for future work in this area. An area of particular interest seemed to be discussion on relations with other dangerous

	5. Training and assistance for countries in transition such as the way in which IAEA has experts who provide such advice; 6. The way in which the Sub-Committee works; and 7. The Sub-Committee's relationship with other UN and regional bodies.	goods regulatory bodies. Understandably, both ICAO and IMO expressed their concerns over the suggestion of a World Convention and the impact on existing conventions. It was suggested that such a convention could exclude from it's scope maritime and air transport; or could include but still place the responsibility of those mode specific issues under the ICAO and IMO. This would allow common provisions for all modes of transport under one instrument but not prevent modal administrations from addressing mode specific or operational considerations in a separate instrument. In addition to examples where the modal regulations differed slightly in text related to the same requirements, some delegates voiced problems with the lack of harmonization between national inland transport regulations which impede international transport. The document will be kept on the agenda for possible future consideration.